

Data Management Plan (DMP) – From FAIR to FAIRER

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Nanyang Technological University, Singapore (NTU) introduced mandatory Data Management Plans (DMPs) in 2016 by embedding this requirement for each research project in our grants management system. This was to promote data sharing aligned with the FAIR principles. While this has advanced open science and reproducibility, the evolving data governance, cybersecurity, and geopolitical landscape have resulted in stricter regulatory and institutional controls on data protection.

To better guide the research community on best practices to ensure research data is both openly accessible whilst securing data that require protection, NTU is updating our DMP to be FAIRER by adding “Ethical” and “Responsible”. This poster presents the rationale and approach of this development.

	CURRENT DMP	ENHANCED DMP	
OBJECTIVES	FAIR Findable Accessible Interoperable Reusable	E Ethical	R Responsible
RATIONALE	Contribute towards research integrity, reproducibility and efficient reuse.	Guides proper handling techniques for securing personal data in human subjects research.	Sensitise researchers involved in sensitive research areas, and obligations to secure and protect such data.
APPROACH	- PI determines data classification level. - No workflow triggers	- Automate data classification based on data types. - Workflow triggers based on data types to relevant university departments for additional support.	
EXAMPLES	DMP QUESTIONS: Please select those that apply: ☐ human subject identifiable data ☐ commercial-in-confidence ☐ national security related ☐ patent/commercialization potential Data classification level? ☐ Open ☐ Restricted ☐ Confidential ☐ Classified	☐ ‘National security-related’ → ‘Classified’ → ‘I have consulted the university IT department that the following data storage platform(s) will be used: _____’ ☐ ‘Patent/commercialization potential data’ → university’s technology disclosure process/information ☐ ‘Human biomedical research data’ → To be disclosed or transferred to external parties? → Informed consent from data subjects? → Method of data transfer? Dropdown list of university-approved data storage and transfer platforms	

The **FAIRER** principles also aims to encompass the **CARE** Principles ‘Collective Benefit’, ‘Authority to Control’, ‘Responsibility’ and ‘Ethics’. A single acronym “**FAIRER**” will make it easier for the research community to adopt good research data management practices that contributes towards open access, data protection, and indigenous data recognition.

